California Advanced Reciprocating Internal Combustion Engines Collaborative
WORKSHOP AGENDA
California Energy Commission

Employment Development Department Auditorium
722 Capitol Mall
Sacramento, CA 95814
July 10, 2001

8:00 AM Registration
8:15 AM Welcome - Terry Surles, Deputy Director (Technology Systems), CEC
8:30 AM Introductions
8:30AM - 12:30 PM Presentations

Panel I Federal, State, and Local Organizations (8:30AM – 9:30 AM)

1. Avtar Bining, *California Energy Commission (CEC)*
   California Advanced Reciprocating Internal Combustion Engines (ARICE) Collaborative – Purpose, Mission, Goals and Targets, and Action Plan.
2. Joanna Livengood, *U.S. Department of Energy (DOE), Chicago Operations Office*
   U.S. Department of Energy's Advanced Natural Gas Reciprocating Engine Program
3. Tony Andreoni, *California Air Resources Board (CARB)*
   An Overview of ARB'S Stationary Engine Emissions Control Plan
4. Martin Kay, *South Coast Air Quality Management District (SCAQMD)*
   Air Quality Issues with Stationary Engines

Panel II Engine Manufacturers (9:30 AM – 10:15 AM)

5. Vinod Duggal, *Cummins Engine Company, Inc.*
   Cummins Advanced Reciprocating Engine Technology for California Distributed Generation
6. Jay A. Burnette**,** *Goodrich Fairbanks Morse Engine*
   Status of Fairbanks Morse Engine Products for Stationary Power Generation
7. Martin L. Willi, *Caterpillar Inc.*
   Caterpillar's Perspective of Reciprocating Engine Technology: Current State-of-the-Art, Potential, Benefits, and Technical Challenges
8. Monte McCormick, *Waukesha Engine Co.*
   Waukesha Engines – Natural Gas Engines

Break (10:15 AM - 10:30 AM)

Panel III National Labs and Universities (10:30 AM – 12:15 PM)

9. Raj Sekar, *Argonne National Laboratory*
   Internal Combustion Engine Research at Argonne National Laboratory

10. Salvador Aceves, *Lawrence Livermore National Laboratory*
    Engine Research at Lawrence Livermore National Laboratory
11. Ron Graves, *Oak Ridge National Laboratory*
    Advanced Reciprocating Engine Technology at the Oak Ridge National Laboratory
12. Bryan Willson, *Colorado State University, Fort Collins, CO*
    State-of-the-Art Technologies for Stationary Natural Gas Engines
13. Robert Dibble, *Solo Energy Inc, Alameda CA*
    Needs of a New Distributed Generation Power Company
14. Don Teixeira, *CEC / University of California*
    Initial Development of Base-line Emission Factors and Near-term Mitigation Techniques
15. Shuh-Haw Sheen, *Argonne National Laboratory*
    Advanced Sensors for Real-time Control of Advanced Natural Gas Reciprocating Engine Combustion

Panel IV Private R&D, Fuels, Exhaust Treatment (12:15 PM – 1:00 PM)

16. James Paul, *Ricardo, Inc*.
    Emissions and Efficiency Targets: Advanced Technology Reciprocating Internal Combustion Engines
17. James J. Cole, *Southwest Research Institute (SWRI*)
    Advanced Reciprocating Engine Technology for California's Distributed Generation
18. Chuck LeTavec, *BP Amoco*
    ARCO EC Diesel Program Update
19. Osama Ibrahim, *Rypos, Inc*.
    Active Diesel Exhaust Particulate Trap for Diesel Engines
20. Paul Miles, *Sandia National Laboratory (SNL)*
    Combustion Research Facility (CRF)

Lunch Break 1:00 PM – 2:15 PM

2:15 PM – 4:30 PM Discussion Topics

- What is the current status of ARICE systems in California?
- What are the ARICE technologies commercially available /not available for California?
- What are the future technologies for ARICE systems?
- What should be the scope and technology focus of the ARICE program?
- What should be the major targets and goals of the ARICE program?
- What should be the key activities for fiscal year 2001?
- What should be the respective roles of engine manufacturers, equipment suppliers, R&D companies, potential users, universities, national laboratories, and government (federal, state and local agencies)?
- What are the potential barriers, problems, and pitfalls?

- Where to go from here?

4:30 PM – 5:00 PM Final Wrap up
5:00 PM Adjourn